TELECOMMUNICATION
MASTER CLASS
2017
(4-day short learning course)

Compiled by ITSI
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2017
The Disruption in Telecoms has already happened

*How can operators effectively manage their companies in a period of disruptive change?*

The largest phone company in the world does not own any network equipment. The emergence of the All-IP telecom network has not only changed the technology of the Core Network and the technology of the RAN, it has also irrevocably changed the Business Model of the Network Operator. New revenue sources like Big Data and IoT is highlighted as the saviour of networks as voice revenue, as part of overall revenue, starts to decline.

The problem however is that the standard business model behind these new revenue sources is far more applicable in advanced economies where intelligent infrastructure, intelligent homes and connected lives can be monetised quite easily. Big Data has immediate revenue potential in changing consumer behaviour of individuals with high disposable incomes.

Generic new revenue sources become far more difficult to harness in developing economies. A unique management mind-set is required where new network technologies are rolled out to a data hungry customer base, without the necessary financial benefits evident in high GDP countries.

Developing economies however have uneven and disparate rates of development, with telecommunication technology often leading other industries. Within this new domain, huge opportunities exist within developing countries where the environment can be made more efficient via the intelligent utilisation of the telecommunication environment.

*How can operators effectively manage their companies in a period of disruptive change?*

This is the core premise of the Telecom Master Class.

The training will provide attendees with:

- A comprehensive framework to understand the business requirements for a Communication Service Provider rather than a Network Operator;
- A comprehensive overview of the new revenue streams of IoT, Converged services, Cloud computing, Big Data in a developing economy;
- An overview of the changes in the network architecture moving from a TDM environment to an all-IP environment;
- An understanding of Next Generation OSS and BSS solutions;
- An insight into the latest business models and pricing strategies in the telecommunications sector, and its applicability in developing countries;
- An understanding of the key strategies in managing the threat of Over-The-Top A framework to analyse the strategy of competitors by using marketing material and annual reports; and
- An effective management framework for Operators in a period of technological transition;
- A comprehensive overview of technological developments in the telecommunications sector; and
A deeper understanding of the client’s needs in a changing marketplace.

Who should attend and why?

The training course is suitable for:

- Managers and Senior Managers who would like to obtain a deeper understanding of the contemporary telecommunication landscape and increase their Business Management knowledge in the field of Telecommunications;
- HR Managers who require an understanding of the skillset change required in an all-IP environment with emerging Communication Service Provider business models;
- Marketing Managers and Executives who would like to know more about future products and new ways of unlocking customer insight in developing economies; and
- Business Executives who are interested in competitive intelligence and alternative pricing strategies.

The training organiser

The Institute for Technology Strategy and Innovation (ITSI), in collaboration with the Business School at North-West University (NWU), has been conducting post-graduate training to the Telecommunication, Financial and ICT sectors for the past 13 years. It graduated more than 3 000 students and delivered more than 100 innovation projects in the past decade. It developed 10 University-based Short Learning Programmes in the Telecommunication, Finance and ICT sectors since 2004.

SECTION 1 – ENVIRONMENT AND STRATEGY

- FUTURE BUSINESS AND TECHNOLOGY LANDSCAPE
- THE 20 LAWS OF THE TELEkosM and 5G
- FUTURE TRENDS
- INTRODUCTION TO TELECOMMUNICATION STRATEGY
- BUSINESS MODEL CANVAS, VALUE PROPOSITIONS AND VALUE DISCIPLINES

Session 1: Future Business and Technology Landscape

The Future Scenario session looks at new technologies and business models, and projects the impact that these technologies will have on the technological landscape.

Telecommunications is at a crossroad. With the convergence of fixed and mobile Telecommunication networks with the Internet under the banner of Next Generation Networks (NGN) and more generally with the continuing impact of IP and information technologies on the network and service provisioning levels, the classic Telecommunication environment is changing dramatically. The participants will therefore be
given an insight into Telecommunication strategy to ensure that they are sensitive to this changing environment. We look at the re-alignment of the Value Proposition, changing market needs and technological advances where Network Operators are becoming fully fledged Communication Service providers.

Outcomes:

After completion of this module, you will be able to:
- Explain business model reframing in a World of Abundant bandwidth.
- Implement the evolution of fibre and hosting technologies.
- Compare the business opportunities made possible within a 5G-network architecture.
- Entertain the future of AR, VR, M2M and Big Data.
- Compare IoT strategies and Business Models.
- Use Big Data as a new revenue source for MNO’s.
- Discuss Mobile Money and the impact on Mobile Commerce.

**Session 2: The 20 Laws of the Telecosm and its Impact on 5G**

The 20 Laws of the Telecosm have been the foundation of Telecommunication Strategy over the past decade. These laws provide a key insight into the expected changes in network architecture.

Outcomes:

After completion of this module, you will be able to:
- Discuss the impact of Shannon’s law on 5G technology.
- Understand the technical foundation for 5G networks.
- Compare the impact of the 20 laws on 5G handsets.
- Observe the future of satellite communication.
- Understand the impact of technology on network spectrum requirements.

**Session 3: Future Trends**

The financial returns of the Operators are heavily dependent on the South African economic environment. We look at the leading indicators of the South African economy and highlight areas of opportunity and concern within the environment.

Outcomes:

After completion of this module, you will be able to:
- Discuss economic growth projections.
- Identify leading economic indicators to consider.
• Interpret economic forecasts within the telecommunication industry.

Session 4: Introduction to Telecommunication Strategy

Telecommunication strategy has changed dramatically over the last decade. Broadband and all-IP networks started to flourish with processing power, profits and value chain forces moving towards the edges of the network. The scope of the operator to alter customer preferences changed drastically with the emerging dominance of handset OS providers.

Outcomes:

After completion of this module, you will be able to:
• Analyse typical examples of solutions available on the market, to understand 21st century networks requirements and to assess possible development and deployment roadmaps.
• Differentiate between key products and philosophies of main vendors.
• Understand Converged Networks future business models and prospected services.
• Understand Architecture principles of classic Telecommunications and all-IP networks.
• Understand and have a sound knowledge of IMS Standards.
• Analyse Network strategy in a converged network environment.
• Compare moving from service providers to packet providers.
• Apply the impact of OTT players on network strategy.
• Explain the impact of Next Generation Network architecture on Network strategy.

Session 5: Business Model Canvas, Value Propositions and Value Disciplines

This part of the course provides an introduction to the Business Model Canvas and how it can be used to define not only a Value Proposition of a company, but also that of a new product. Participants will be introduced to various types of Value Propositions as defined by its Value Discipline. This insight will later be used to define the Value Propositions and Value Discipline of the Operator and all its competitors. This will lead to a better understanding of the Operator and how it competes within the marketplace.

Outcomes:

After completion of this module, you will be able to:
• Use of the Business Model Canvas to map a company and its Value Proposition.
• Apply the Business Model Canvas to map a new product.
• Align Resources with the Core Market needs.
• Identify various types of Value Disciplines.
• Use Value Disciplines to map the Value Proposition of the Operator and its competitors.
SECTION 2 – MARKETING ANALYSIS AND MARKETING STRATEGY

- BRANDING AND BRAND ALIGNMENT
- MARKET ANALYSIS AND SEGMENTATION
- TELECOMS MARKETING MANAGEMENT
- WORKSHOP: COMPETITIVE INTELLIGENCE – VALUE PROPOSITIONS AND BRANDS
- WORKSHOP: CUSTOMER JOURNEY MAPPING

Session 1: Branding and Brand Alignment

This module provides an introduction to Branding. Brand identity is critical for a company that has a variety of different products and market segments. It is critical that any new product and its associated advertising campaign be aligned with the overall brand identity of the company. The different brand identities of the competitors will also be analysed and critiqued.

Outcomes:

After completion of this module, you will be able to:

- Explain the link between brands and archetypes.
- Identify the major archetypes used in the most dominant brands.
- Link the archetypes to the companies’ own brand position.
- Analyse and discuss the different brand identities of the competitors.

Session 2: Market Segmentation

This module provides an introduction to Market Segmentation in the Telecommunication space. Various techniques will be discussed to differentiate market segments. The advantages and disadvantages of each of these techniques will be discussed, as well as which techniques are more relevant to Telecom Operators.

Outcomes:

After completion of this module, you will be able to:

- Analyse different market segmentation strategies.
- Explain the pros and cons of different market segmentation approaches.
- Link Core Benefits to targeted market segments.
- Discuss the various market segments used by an Operator’s competitors.

Session 3: Telecoms Marketing Management

This module provides an introduction to all aspects of marketing, including strategic marketing planning, marketing research, product planning and development, promotion planning, distribution and pricing. It
provides an understanding of the theories of the marketing mix variables and a practical application in the context of the marketing management cycle processes of research, planning, organising, implementation and control.

Outcomes:

After completion of this module, you will be able to:

- Analyse market segmentation strategies.
- Explain Reputation management and the 'dark side' of PR.
- Plan and manage the Go-to-market strategy of a new product.
- Manage the Advertising function.
- Create a Public Relationship function for a new product.
- Explore the go-to-market process from message to media to activations.

**Session 4: Competitor Analysis – Value Proposition and Brand Alignment (Workshop)**

This module will allow the participants to identify exciting and emerging market segments of their competitors by comparing its marketing material. The Competitor Analysis will go further by assessing technical capabilities of each operator and mapping that to their marketing material, their brand and their value proposition.

Outcomes:

After completion of this module, you will be able to:

- Identify the market segments that are of importance to the company and its competitors.
- Assess the alignment of the marketing material and its linkages to its brand identity.
- Determine the Value Proposition of a company by looking at its marketing material and annual reports.
- Determine the Value Disciplines of each of the Operators.

**Session 5: Customer Journey Mapping (Workshop)**

This module will allow the participants to map the Customer Journey for a specific product or service. The participant will be introduced to a variety of Customer Journey mapping tools that will enable them to enrich the CRM process.

Outcomes:

After completion of this module, you will be able to:
Identify the various steps in the Customer Journey map.

Apply the Egg model to map the Customer Journey.

Identify online and offline activities to enrich the Customer Journey.

**SECTION 3 – MARKET RESEARCH VIA NARRATIVE ENQUIRY**

- MARKETING INSIGHT THROUGH NARRATIVE ENQUIRY
- NARRATIVE ENQUIRY - PRACTICAL WORKSHOP

**Session 1: Marketing Insight through Narrative Enquiry**

Narrative inquiry is used to identify hidden patterns of behaviour and thought that cannot be identified using traditional patterns of inquiry. To understand the dynamics “below the waterline” in a complex social system, we use a process of narrative inquiry. The reason for this focus on narrative or story is that human beings make meaning of their life experiences, whether as employees in an organisation or as consumers who interact with brands and products/services through narratives. We string together different experiences and stories we hear into coherent narratives that over time influence how we make decisions and how we behave. If we therefore want to understand what influences customer satisfaction or loyalty, asking simple direct opinion-based questions like a typical NPS, will not yield actionable insight. We need to gather and understand the narratives that are informing people’s sense-making and decisions. A narrative inquiry can take many different forms depending on the methods we choose to use.

In essence, the process involves gathering stories by asking open questions that contain no hypothesis e.g. if a best friend told you that they were considering changing mobile operators from company X to company Y, what experiences would you share with them to encourage them to do so, or not?

**Outcomes:**

After completion of this module, you will be able to:

- Understand the deep inefficiencies and inaccuracies of the current methodologies used in market research.
- Obtain a deeper understanding of human brain behaviour and sense-making.
- Identify hidden patterns of human interaction.
- Obtain a deeper insight in organisational diagnostics and market research.
- Link micro-narratives with human sense-making to create advanced decision support, research and monitoring capability.
**Session 2: Narrative Enquiry – Practical Workshop**

The workshop session will provide attendees with first-hand experience around the practical benefits and additional insight that can be obtained from the market by using Narrative Enquiry.

The storytellers are then taken through a process of collectively making sense of the gathered narrative in order to facilitate action e.g. to design new products/services or if inside an organisation, culture interventions.

A key question or intervention design is: What do we need to change or do differently in order to get more stories like “these” and fewer like “those”? This allows us to shift prevailing patterns in the system through small “nudges” in a beneficial direction.

**SECTION 4 – POLICY, BUSINESS MODELS, FIBRE-HOSTING AND PRICING STRATEGIES**

- IP POLICY AND REGULATIONS
- COMPETITIVE INTELLIGENCE and M & A
- BUSINESS MODELS AND PRICING STRATEGIES
- SA CASE STUDIES
- FIBRE-OPTIC NETWORKS, HOSTING AND CLOUD SOLUTIONS

**Session 1: IP Policy and Regulations**

The South African and African Policy and Regulation frameworks will be discussed, providing the participant with a clear understanding of the Telecoms playing field with its associated threats and opportunities.

**Outcomes:**

After completion of this module, you will be able to:

- Discuss ICT Policy and Regulation.
- Compare this with International standards.
- Understand National ICT policy development.
- Discuss regulatory functions and models e.g. spectrum allocation and management, costs and tariffs.
- Analyse competition and privatisation.
- Discuss universal access.
**Session 2: Competitive Intelligence and M & A’s**

COMPETITIVE INTELLIGENCE: Annual reports, websites and monthly deal sheets are a goldmine of information in trying to determine the competitor’s strategy. We discuss frameworks that can be used in Competitive Intelligence and analyse the latest monthly deal sheets in order to obtain more insights.

**Outcomes:**

After completion of this module, you will be able to:
- Compare Value Disciplines of the various MNO’s.
- Identify strategic markets targeted by competitors.
- Understand the pricing strategies of competitors based on different network architectures.
- Identify the various handset strategies based on divergent company strategies.
- Obtain knowledge about new markets targeted by your competitors.
- Compare the Network capability of different operators.

M & A’s: Local and foreign companies still face challenges in the Mergers & Acquisition arena. This module will debrief issues around due diligence and sound local knowledge as vital components of a successful merger or acquisition. The motivation for a merger or acquisition generally arises from a saturated domestic market or a differentiated product that is believed to be unique, particularly in the field of technology. A number of large organisations choose to outsource divisions to foreign countries where it is more economical to do business. Trade-offs between costs and savings when striving for uniformity can be challenging for the “mother” company.

**Outcomes:**

After completion of this module, you will be able to:
- Discuss strategic alignment as a concept within the industry.
- Consider “When to Ally” and “When to Acquire”.
- Identify the challenges of a Core Competence strategy vs. Strategic Business Unit strategy.
- Identify M & A opportunities in the ICT Environment.
- Discuss how to make Strategic Alliances work (SMR).
- Discuss Strategic Outsourcing of Peripheral to Core Activities.
- Understand the notion of Corporate Venturing.
- Discuss growth through Acquisitions.

**Session 3: Business Models and Pricing Strategies**

In this module the participants are given a strategic view on the relationship between core and fixed networks and how that impacts on new Business Models based on converged networks. The session provides for an overview on a changing business environment enforced by convergence.
New Business Strategies and Business Models are discussed in a world where revenue is inexplicably moving from a voice dominant revenue environment to an environment typified by data convergence.

Outcomes:

After completion of this module, you will be able to:

- Compare the notion of “from subscriber to broadband consumer” – evolving value propositions for broadband consumers.
- Discuss the evolvement of enterprise value propositions.
- Explain the process from bit and voice minute to value wholesaling.
- Understand marketplace dynamics.
- Identify applications in a world of abundant bandwidth.
- Discuss new application and convergence strategies.
- Identify network and service evolution scenarios.
- Understand business models for and charging of new services.
- Debrief value added services and competitor analysis.

Session 4: Telecom Case Studies - South Africa

This module analyses a variety of South African country case studies that highlight key lessons in competing in this mature market. Key lessons from these case studies are identified.

- **Cell C** – A case study of how the mobile operator has tried to re-style and re-invent itself to survive and grow in the local market against larger MNOs and an increasingly competitive environment. The success of Cell C in growing its market share over time in terms of subscribers but not necessarily revenue is also considered.

- **Vox Telecom** – A case study of a service provider becoming an infrastructure operator and expansion from network into cloud services.

- **Vumatel** - A new player in the FTTx space.

Session 5: Fibre-optic Networks, Hosting and Cloud Solutions

The Fibre-optic revolution is in full swing, even in developing countries. Network Operators are also playing in this space, but face a different type of competitor. Competing technologies like GPON (backed by the ITU), and GEAPON (backed by the IEEE) make the environment even more difficult to navigate. This section not only looks at the technology, standards and operating environments, it also looks at the various strategies that can be followed by an Operator in order to provide a competitive advantage in harnessing all its resources within its value proposition.
Outcomes:

After completion of this module, you will be able to:

- Understand Fixed Networks standards and technologies.
- Describe Switching technology principles.
- Explain the basics of signalling and transmission.
- Understand Access and transmission networks.
- Explain and compare the latest trends in access technologies (FTTH, GEPON, and GPON).
- Evaluate the business opportunities enabled by Next Generation Networks.
- Explain the difference between Paas, Saas and Iaas.
- Discuss various hosting strategies and solutions.

SECTION 5 – TECHNOLOGY AND OPERATIONS

- MOVING FROM TDM TO ALL-IP
- LTE – FREQUENCY, STRATEGY AND OPERATIONS
- NEW DEVELOPMENTS
- NEXT GENERATION OSS / BSS
- WRAP-UP AND SUMMARY

Session 1: Moving from TDM to ALL-IP

Convergence played a fundamental role in the move from a Time-Division Data packet architecture (TDMA, ATM) to a Packet Switched Architecture (TCP/IP). This session highlights the key changes within the technology and the associated changes in pricing and network strategy adopted by the networks. We track the degree of change in comparison with other networks and highlight the changes that may come.

Outcomes:

After completion of this module, you will be able to:

- Discuss pricing challenges in an all-IP environment.
- Evaluate the importance of Policy Management and the IP Multimedia Subsystem in a changing telecommunication environment.
- Understand network-outsourcing strategies.
- Debrief e- and m-applications.
- Understand the influence of Cybersecurity and Cybercrime.

Session 2: LTE – Frequency, Strategy and Operations

The LTE network is fundamentally different to 3G networks, in terms of data switching and frequency modulation. This module will unpack the business impact of these technologies. It will discuss these aspects
in an easily digestible fashion to provide the participant with just enough information to make informed decisions.

Outcomes:

After completion of this module, you will be able to:

- Debrief the ITU’s IMT Advanced standard (UTRAN LTE).
- Discuss spectral efficiency of LTE networks and what it means for network architecture.
- Understand frequency bands and economy of scale considerations.
- Review the impact of the 20 laws on 5G handsets.
- Assess the future of satellite communication.
- Evaluate the impact of technology on network spectrum requirements.

Session 3: New Developments

In this module the participants are given a strategic view into the opportunities that are opened up by new technologies and new network architectures. In this module we analyse the impact of Tower Hotels, Software Defined Networks, Multi-channel packet transport radios and the network architecture required for IoT.

The module provides an overview of the tactical and strategic issues in the Telecommunication environment in general and specific issues related to core, fibre line and mobile technologies. In riding the wave of convergence, it gives a bird’s eye view of service provider investments in these networks around the world and the respective drivers thereof.

Outcomes:

After completion of this module, you will be able to:

- Debrief Wi-Fi, Fibre and Tower Hotels and discuss the Battle of the Building.
- Harness the opportunities opened up by Software Defined Networks.
- Discuss the value proposition behind Software Defined Radio.
- Understand Packet Gateway technology.
- Compare Network and service evolution scenarios.
- Evaluate the impact of Virtual SIMs and multi-channel packet transport.
- Explain how cloud will impact upon Network strategy.
- Explain the impact of IoT on Network strategy.
- Understand the impact of Software Defined Networks.
- Understand and apply network optimisation strategies in a converged environment.
- Understand and apply network-dimensioning procedures in a converged environment.
- Differentiate between key products and philosophies of main vendors.
Session 4: Next Generation OSS / BSS

OSS and BSS systems need to adapt to changing network architectures and new technical realities based on bandwidth availability and local loop developments.

Outcomes:

After completion of this module, you will be able to:

- Identify new areas of importance in Next Generation Networks.
- Understand the impact of OSS/BSS on agility and new product development.
- Understand the impact of OSS/BSS on the Internet of Things service provisioning.
- Pursue how other service providers are moving beyond their traditional fixed or mobile borders.
- Understand how major Telecom players worldwide are evolving their networks and services.
- Understand the need for Operational Support Systems, Inventory Management, Performance Management and Network Data Management.
- Understand the Operational Challenges in the Telecommunication Market.
- Compare the various OSS frameworks/models.
- Evaluate the role OSS plays in achieving Operational Excellence.
- Understand the emerging standards in Converged Network Management solutions.
- Discuss the operational issues related to Converged Networks.
- Describe the building of an optimal Service Ready Network.
- Understand the Business Models used by various Mobile Network Operators.

Session 5: Wrap-up and Summary

This session will strive to put the previous modules in context and provide a holistic overview of the various modules. The modules will be woven together to provide a comprehensive overview of theory and its application in the Telecommunication domain.

Facilitators

Pieter Geldenhuys (B.Eng MBA)
Pieter Geldenhuys has a degree in Electronic Engineering, an MBA specialising in Technology Strategy and is currently busy with a PhD thesis in Innovation Management. He is guest lecturer at Cornell University, Henley Business School, Duke, GiBS and NWU. He was the previous Vice-Chair of the Innovation Focus Group at the ITU (International Telecommunication Union) in Geneva, Switzerland. He is the Founder and Director of the Institute for Technology Strategy and Innovation, aligned with North-West University.

Tonie Tollig (B.Eng M.Eng)
Tonie has a large differential skill range which he primarily acquired while being involved in the Telecommunication sector for the past 15 years and has experience in the following key areas:
- Regulatory, Engineering and Operational Business & Cost Modelling – Played the principal role in many
projects requiring modelling for cost analysis, regulatory models (LRIC, CCA & AS), scenario planning and the launch of new operations and/or networks as well as products/price plans.

- **Business Analyst and Telecommunication operational specialist** - Define, design and/or optimise the business, functional and operational requirements of mobile and fixed telecommunication operators. This was performed with the intention to perform revenue assurance, launch new operators, launch new mobile products and/or source and implement prepaid and postpaid Billing and Customer care systems.
- **Network Technical Consulting** - Knowledge of mobile -, fixed (fibre and copper) - and fixed wireless access, ISP, network core and related voice technologies. He has consulted to mobile, fixed operators and regulators with regard to the strategy, implementation, and operational complexities and costing of these.
- **Strategic Consulting** – Tonie has been a core member of a number of Telecoms Industry Strategic Consulting Assignments, and has built up a commanding knowledge of the strategic background and core drivers of the Telecoms industry as a whole. His contribution has primarily been focused around marketing and technical related issues.

**Theko Makhoalibe (B.A. M.Phil)**

Theko is a Business Futurist and Strategist focusing in the areas of strategic foresight, business model innovation and digital platform architecture through tech start-ups. He is currently consulting with Blank Canvas Int. in their strategic advisory services portfolio and Sustainability Summit. He is managing partner and Head of Strategy of IoT Africa Holdings (Pty Ltd), which is an innovative company in the ICT space with the aim to open Africa’s digital corridor through IoT technologies.

He is affiliated with various think tank institutions ranging from the Institute of Futures Studies as a research associate; the Centre for Global Enterprise as a global scholar; a member of the MIT Solve CoLab Intelligence community and a member of the MIT tech startup network where he founded three platform startups. He is the winner of the MIT Global Startup Lab Ignitor award and the prestigious UCT Genesis Innovation award.

He holds a degree in Human Resources and Organisational Psychology from the University of Kwazulu Natal, a Post Graduate Diploma in Future Studies from the University of Stellenbosch Business School and a M.Phil in Future Studies with the University of Stellenbosch. His thesis research area focused on “How can business in Africa harness exponential technologies in the Fourth Industrial Revolution by 2025”.

**Roald Kvevli (B.Sc Eng MBA)**

Roald has resumed his role as an Independent Telecommunications Consulting Professional, and is currently focussed in the areas of telecommunications business and technology strategy, telecommunications technology rollout and planning, telecommunications network and product costing, telecommunications cost optimization, business planning and modelling, and network systems integration. He holds a degree in Electronic Engineering and an MBA.
Ryan Gould (B.Com, MA (SA))
Ryan is a Chartered Marketer with almost 2 decades of marketing experience across several disciplines and segments. Ryan was the previous CEO of IPSOS South Africa, and the General Manager: Brand & Communications at MTN.

He specialises in Customer Insight, Marketing Intelligence, Strategy and Business Planning, Brand development, Integrated Marketing Communications, Digital marketing, PR, Sponsorship and Media Strategy.

Dobek Pater (MA MBL)
Dobek Pater currently works at Africa Analysis in the capacity of a Telecommunications and Market Analyst. Dobek has participated in numerous telecommunications projects, assessing both telecommunications markets and telecommunications technologies in various countries in Africa. Dobek has experience in servicing a diverse base of clients (operators, service providers, infrastructure suppliers, government departments and agencies), as well as market monitoring bodies such as regulators.

George Debbo (B.Sc Eng M.Sc Eng Pr. Eng)
George has over 40 years’ experience within the telecommunications sector, two-thirds of which was spent within an Operator’s environment and one-third within the vendor community. He has a wealth of knowledge and insight on both sides of the telecommunication spectrum and uses this to the advantage of his clients.

George has been involved in the development and roll-out of some of the largest telecommunication networks in sub-Saharan Africa, including the transmission and ADSL network in Telkom SA, the deployment of one of the first metro fibre networks in Africa with MTN in Uganda, the deployment of the first LTE network in sub-Saharan Africa with Movicel in Angola and the deployment and subsequent upgrades of the countrywide core fibre network in Namibia, to name just a few.

Sonja Blignaut (B.Sc)
Sonja is the Co-founder and executive director of The Narrative Lab (TNL). TNL’s main focus is the application of complexity principles and narrative research to assist large organisations to understand intractable problems and gain actionable insight.

Dr. Melani Prinsloo (B.Com, M.Com, PhD)
Melani is a director of Infusion, a marketing research company in South Africa and teaches marketing and customer relation management while also being adjunct member of faculty at Ecole Nationale Ponts et Chaussees, Paris, France; Grenoble School of Management, France and Helsinki School of Economics. Her work has appeared in journals such as Advertising Express, International Journal of Technology Marketing and International Journal of Marketing Research.
DELIVERY METHODOLOGY

The principle of customisation was taken into account with the development of this short learning course customising the learning interventions to the level of the target group and also to the outcomes to be achieved. One of the critical attitudes for success is one’s relation to learning and development. Interventions with the correct emphasis on the relationship between Knowledge, Skills and Mindsets were therefore constructed. All interventions are based on constructivist learning, accommodating multiple intelligences. This briefly means experiential learning and development with an emphasis also on peer-to-peer assistance and evaluation. Facilitator and expert intervention is central to the process for guidance and outcomes purposes.

All of the interventions will be delivered through physical contact sessions. Where circumstances dictate and technology is available, delivery via video conferencing will take place.

Each of the modules will have a complete study guide. In some of the instances textbooks will also be supplied as well as relevant articles.

REGISTRATION

This short learning course is registered with the NWU as a Short Learning Programme.

CONCLUSION

The purpose of this document is to give a brief summary of the modules that constitute the short course. The most important characteristic of this course is that the knowledge transferred to the students is of such a nature that it can be practically applied. Although the short course encapsulates the latest thinking, both in a technology and management sense, the content of each of the modules is both practical and immediately implementable within the organisation. The facilitators on this course have extensive experience in the Telecommunications environment and will therefore convey the content in such a way that the participants do not experience any gap between the reality they face every day and the content within the course.

Please do not hesitate to contact us for any enquiries.

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